

# **A Critical Appraisal of the Economics Rationale of Government-Subsidized Manpower Training**

## **La politique économique à la base des programmes de formation de la main-d'oeuvre**

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Volume 25, numéro 3, 1970

URI : <https://id.erudit.org/iderudit/028155ar>

DOI : <https://doi.org/10.7202/028155ar>

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Éditeur(s)

Département des relations industrielles de l'Université Laval

ISSN

0034-379X (imprimé)

1703-8138 (numérique)

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Citer cet article

Mehmet, O. (1970). A Critical Appraisal of the Economics Rationale of Government-Subsidized Manpower Training. *Relations industrielles / Industrial Relations*, 25(3), 568–581. <https://doi.org/10.7202/028155ar>

### Résumé de l'article

Les programmes gouvernementaux de formation de la main-d'oeuvre ont connu depuis quelques années une expansion rapide. Les économistes entreprennent sans hésiter des recherches empiriques visant à évaluer le rendement des fonds publics utilisés à cette fin, sans s'attacher outre mesure, cependant, aux théories de base qui motivent une politique de formation de la main-d'oeuvre.

Comment expliquer la politique de formation de la main-d'oeuvre ?

Est-il justifiable de financer les programmes de formation de la main-d'oeuvre au moyen de fonds publics ? Quelles sont les limites d'une politique de formation de la main-d'oeuvre ?

Nous analysons ces questions à la lumière de trois aspects économiques importants, issus respectivement de la macro- et de la micro-économie, et de l'économie du bien-être.

Premièrement, l'hypothèse du chômage structurel justifie théoriquement ces programmes de formation en supposant qu'elles rendront plus faciles les échanges nécessaires pour obtenir à la fois une stabilité des prix et un niveau élevé d'emploi ; deuxièmement, l'hypothèse d'un marché du travail structuré en confirme le bien-fondé en affirmant que le secteur privé ne veut pas ou ne peut pas satisfaire à la demande de formation de la main-d'oeuvre requise par le taux de croissance économique.

Troisièmement, l'hypothèse des bénéfices sociaux justifie ces programmes par le fait qu'une telle politique gouvernementale produirait, au niveau social, des économies nettement supérieures aux coûts impliqués.

Une évaluation de ces trois approches permet d'y voir d'importantes limites. Pour ce qui est de l'argument au niveau structurel, il est prouvé que la formation de la main-d'oeuvre ne joue qu'un rôle restreint dans la stimulation de la demande, puisque l'offre de travailleurs plus qualifiés ne peut pas d'elle-même créer une demande pour ces travailleurs qualifiés. L'argument structuraliste ne tient pas compte des difficultés qui existent à évaluer l'ampleur et le type de la formation déjà fournie par l'entreprise privée et par les travailleurs eux-mêmes, ainsi que la quantité résiduelle de formation que le gouvernement devra fournir pour combler le déficit. Pour ce qui est des bénéfices sociaux de ces programmes, il est tout indiqué d'affirmer qu'ils échappent à toute mesure monétaire, de sorte qu'il demeure impossible d'évaluer financièrement l'avantage social de ces programmes, ainsi que le coût qu'ils impliquent.

On peut donc justifier la politique gouvernementale de financement des programmes de formation de la main-d'oeuvre, en s'appuyant sur la théorie économique, sans pouvoir toutefois fixer le point d'ampleur que doit prendre ces programmes. Les problèmes théoriques et pratiques qui l'empêchent font voir aussi le danger qui existe de dépasser ce point maximal et de dépenser inutilement les fonds publics, sous prétexte qu'il est motivé par un raisonnement logique.

Il est facile de pousser très loin un tel raisonnement et d'en exagérer l'importance

# A Critical Appraisal of the Economic Rationale of Government-Subsidized Manpower Training

Ozay MEHMET

*The author endeavors to present a detailed analysis of the economic rationale of a manpower training policy, and provides useful insights on its limits through a selective study of macro-, micro-, and welfare economic theory.*

Recent years have witnessed a rapid expansion of government-subsidized manpower training schemes. This fact represents a new form of state intervention in the workings of the labour market. As a result, it gives rise to a number of fundamental questions such as : What is the rationale of a manpower training policy ? On what economic grounds can government subsidy for manpower training be justified ? What are the limits of manpower training policy ? These sort of questions have received surprisingly little attention by economists who have shown no reluctance to undertake studies designed to evaluate the economic effectiveness of public expenditures on manpower training. While this one-sided interest can be explained, in part, by the relative attractiveness of empirical as opposed to conceptual problems, the importance of the questions raised cannot be ignored, particularly in the contemporary world of rising taxes and government costs.

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\* The author would like to thank his colleagues, Professors D. P. Ross, and B. Green (University of Windsor) for their helpful comments on an earlier draft of this paper.

Accordingly, this article endeavours to present a detailed analysis of the economic rationale of a manpower training policy with an attempt to infer guidelines from economic theory for determining its limits. This will be done by examining three major topics in economics that shed considerable light on the rationale of a government-subsidized training scheme. These topics, drawn respectively from macro-, micro-, and welfare-economics, are : the Structural Unemployment Hypothesis, the Structured Labour Market Hypothesis, and the Externality Argument.

It should be stated at the outset that it is not the aim of this article to survey the extensive literature dealing with these topics, nor is it to give an exhaustive account of these topics ; rather, the purpose is to examine, fairly selectively, those aspects of each topic that provide useful insights for a clear account of the economic rationale of a manpower training policy.

### **The Structural Unemployment Hypothesis**

The structuralist debate<sup>1</sup> has played an important role in the emergence of manpower training as a specific tool of labour market policy<sup>2</sup>. It is therefore worthwhile to examine the arguments advanced by the structuralists in favour of government-sponsored training schemes.

At the root of the structural unemployment hypothesis is the assumption that the market-price mechanism, particularly the employment market, has become less efficient as an allocator of manpower resources among occupations, industries and regions. This assumption rests, basically, on two arguments. First, shifts in the composition of final demand and technology bring about a 'twist' in the mix of labour demand by reducing the demand of untrained workers while increasing the demand for trained workers<sup>3</sup>. Second, the market mechanism cannot bring about a smooth and speedy readjustment of the labour force to

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<sup>1</sup> For a comprehensive survey of the structuralist debate, see John W. L. WINDER, « Structural Unemployment » in *The Canadian Labour Market : Readings in Manpower Economics*, Arthur Kruger and Noah M. Meltz, editors, Centre for Industrial Relations, University of Toronto, 1968, pp. 135-220.

<sup>2</sup> In point of fact, it may be stated that structural unemployment and fears about automation were the immediate causes leading to the enactment of legislation providing for federally-supported training programmes in Canada and the United States in the early sixties.

<sup>3</sup> Charles KILLINGSWORTH, « Automation, Jobs and Manpower » in *Labor and the National Economy*, William G. Bowen, editor, New York, W.W. Norton & Co. Inc., 1965, p. 127.

'twists' in the composition of final demand or technology partly because of limited mobility of existing supply of labour between different occupations, industries or regions, and partly because the development of trained manpower requires a certain period of time. As a result, there may be a mismatching of supply and demand in the labour market with unplaced job-seekers co-existing with unfilled vacancies, which may persist for as long as the skills and qualifications of unplaced job-seekers do not match the requirements of employers. In the long-run, of course, the price-market mechanism may bring about an equilibrium in the employment market. But, partly because this long-run equilibrium may be attained after a significant time-lag, and partly because in the short-run it may necessitate either a politically unacceptable level of unemployment or a rapid rise in prices, reliance on the traditional tools or stabilization, which operate via the price mechanism, cannot afford a sufficient prescription for eliminating persistent unemployment. The remedy must, therefore, be sought in labour market policies such as manpower training and mobility programmes designed to bring about a more adaptable and mobile supply of manpower resources, and thereby a speedier equilibrating process in the labour market and an improved reconciliation between price stability and unemployment<sup>4</sup>.

#### THE TRADE-OFF ANALYSIS

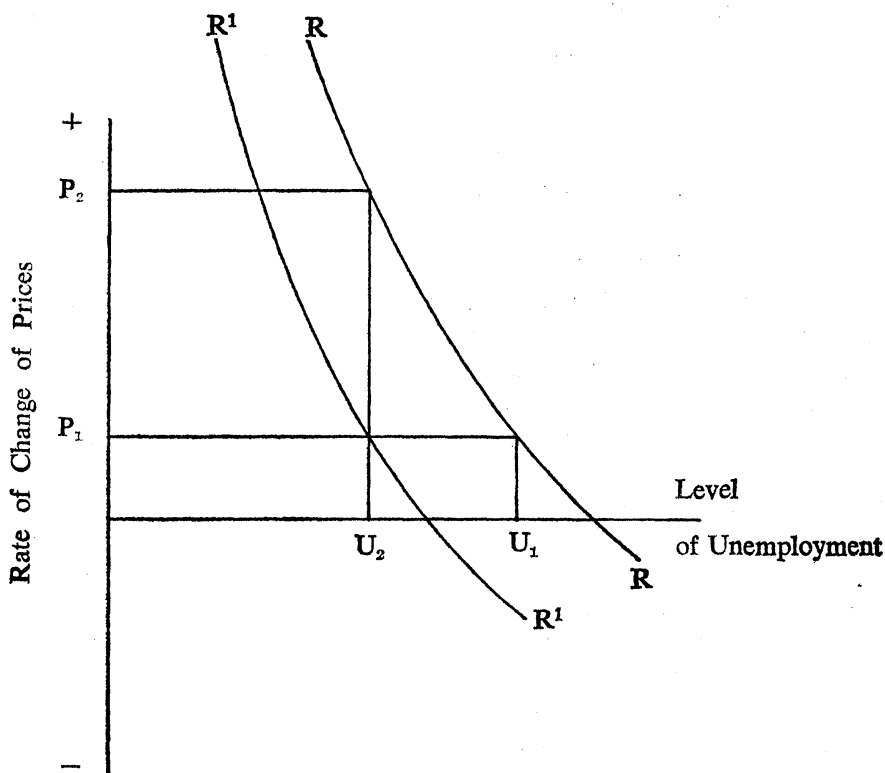
The manner in which this result can be achieved has been considerably clarified in theory with the important development of the Phillips-Lipsey Trade-Off Curve<sup>5</sup>.

Figure I illustrates the type of contribution that a manpower training policy can make to the achievement of 'better' trade-off options yielding high employment with price stability. The RR curve called the trade-off curve, shows the combinations of unemployment and percentage change of prices which can be attained by varying the level of aggregate demand by means of fiscal and monetary policies. The slope and position of

<sup>4</sup> While assigning first priority on labour market policies, structuralists recognize the importance of fiscal and monetary measures. Thus, Killingsworth emphasized the need for «a whole arsenal of weapons» consisting of a mix of traditional stabilisation policies and increased manpower training and mobility programs. *Op. cit.*, p. 135.

<sup>5</sup> A. W. PHILLIPS, «The Relation Between Unemployment and the Rate of Change in Money Wage Rates in the United Kingdom, 1861-1957» in *Economica*, November, 1958, pp. 283-299; R. G. LIPSEY, «Structural and Deficient-Demand Unemployment Reconsidered» in *Employment Policy and the Labor Market*, Arthur M. Ross, editor, University of California Press, 1965, pp. 210-255.

FIGURE I

*Phillips-Lipsey Trade-Off Curve*

the RR curve at any given period is determined by the structure of the labour force, volume of labour mobility, availability and utilization of labour market information and, generally, structural relationships in the economy. While different combinations of unemployment and inflation could be achieved by movements along the RR curve through appropriate fiscal and monetary measures, the impact of manpower training would be to shift the RR curve leftwards to, say,  $R'R'$ .<sup>6</sup> If the politically

<sup>6</sup> There are other factors beside manpower training that can shift the RR curve leftwards. These include increased rate of productivity gains, decline in union power in collective bargaining, increased competitiveness in product markets, and incomes policy.

acceptable price inflation were fixed at  $P_1$  the effect of manpower training would be to cut the level of unemployment that would be consistent with this rate of inflation from  $U_1$  to  $U_2$ . Alternatively, if the level of acceptable unemployment is fixed at  $U_2$ , then the rate of inflation would be reduced from  $P_2$  to  $P_1$ .

In summary, therefore, the structuralist case for a government-subsidized manpower training programme rests on the premise that it can improve the reconciliation of price stability and high employment level. Thus, a neat theoretical justification for such a training programme can be inferred from the trade-off analysis.

#### OPTIMAL VOLUME OF TRAINING

A government-subsidized training scheme will, no doubt, have a cost representing opportunity foregone elsewhere by using public resources for such a scheme. Matched against this cost is the expected benefit of additional real output, i.e. less unemployment or inflation. A leftward shift in the trade-off curve due to manpower training reflects the assumption that the benefits of training (measured in terms of the present value of additional real output) exceed the costs of providing it. Assuming that all government-subsidized training yielding a net return on the basis of benefit-cost analysis shift the trade-off curve leftwards, it does not follow that the scale of such training should be extended up to the point where the average benefit-cost ratio falls to unity: the optimum scale of training is determined not by average but by marginal benefit-cost ratio. The latter is the point where the benefits added by the last increment of training, (e.g. the last trained person) have fallen to the level where they just return the cost of providing this incremental amount of training. Normally, the average benefit-cost ratio would continue being greater than unity for a significant volume of training beyond the point where the marginal benefit-cost ratio falls to unity. However, it would be inefficient to push the scale of training any further than that which is indicated by the marginal criterion. Viewing costs and benefits from the standpoint of community as a whole, violation of the marginal criterion would imply that the social sacrifice incurred elsewhere in the economy in order to support the incremental scale of training is greater than the contribution of this incremental scale to social real income. In that situation it would be to society's advantage to reduce the amount of government-subsidized manpower training until equality between social costs and benefits is attained.

## A CRITICAL APPRAISAL OF THE STRUCTURALIST CASE

While theoretically attractive, the structuralist argument for government-subsidized training has serious practical limitations. In the first place, no empirical evidence has been furnished by its proponents showing that training schemes can effectively shift the trade-off curve leftwards as assumed in theory despite the fact that several empirical studies suggest that such schemes generate significant net returns on the basis of benefit-cost studies.<sup>7</sup> Since there are other factors capable of shifting the trade-off curve besides manpower training, the task is complicated by identification and measurement problems surrounding the relative contribution of the latter to an improvement in the trade-off options. In practice, a trained worker can be placed in a job only if there are more jobs and more jobs will be available only if and when aggregate demand is expanding. So long as the supply of training cannot of itself create demand for trained workers, training can play only a limited role as a complement of demand — stimulating policies. As a general rule, manpower training policy can make a greater contribution in periods of rising aggregate demand and tight labour market-conditions than in recessionary periods.

Another major difficulty with the structuralist case for government-subsidized training programmes concerns the practical determination of the optimal amount of such training. Although the marginal criterion discussed above provides an attractive theoretical yardstick, the measurement of marginal costs and benefits, particularly from the social viewpoint, is a hazardous and elusive task. To date no satisfactory methods for this purpose have been devised. Virtually all empirical benefit-cost studies have been conducted in terms of average rather than marginal benefits and costs<sup>8</sup>. Yet, it has been shown above that the average criterion has a tendency to result in a inefficiently large scale of training. Consequently, the case for government-subsidized manpower training, if and

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<sup>7</sup> Recent studies of American manpower training schemes, subsidized by the federal and state governments, indicate as high as 109% rate of return for male trainees. See: G. O. CAIN and E. W. STROMSDORFER, «Retraining in West Virginia: An Economic Evaluation», in *Retraining the Unemployed*, G. G. Somers, editor, the University of Wisconsin Press, Madison, 1968, p. 323. Other benefit-cost studies show similarly favourable results for public expenditure on training. See: M. E. BORUS, «A Benefit-Cost Analysis of the Effectiveness of Retraining the Unemployment», *Yale Economic Essays* volume 4, Fall, 1964, pp. 371-430; D. A. PAGE, «Retraining Under the Manpower Act: A Benefit-Cost Analysis» *Public Policy*, Volume 13, 1964, pp. 257-267.

<sup>8</sup> For a typical example see the article by D. A. PAGE referred to in the preceding footnote.

when supported by empirical findings based on the average criterion, is likely to involve a certain element of overselling.

There is one special case of structural unemployment which, at first sight, appears to lend convincing support for a government-subsidized training scheme : Manpower redundancy resulting from the introduction of labour-saving production techniques or from industrial decline in a specific locality. A closer examination of the situation, however, may lead to a different conclusion. For example, if manpower redundancy occurs in a labour-surplus area, a training or retraining scheme, by itself, is more likely to stimulate out-migration than re-employment locally. In view of this prospect, it is necessary to study the feasibility of promoting capital inflow into the area as an alternative to encouraging outward mobility of labour through training. In the former approach, a training scheme may well play an important role as a complement to, say, fiscal incentives designed to attract new industry into the region. Such a role, however, will be more limited than what might have appeared at first.

### **The Structured Labour Market Hypothesis**

The structuralists evaluate the allocative efficiency of the labour market in macro-economic terms ; their justification for government-subsidized training rests on macro criteria. But, economists have traditionally analysed the workings of the labour market using the tools of micro-economics, such as the principle of marginal productivity of labour and the assumptions of partial equilibrium analysis.

The traditional (marginalist) analysis of the labour market has, in the last quarter century, been challenged by the institutional labour economists who have generally taken the viewpoint that the imperfections and rigidities of the market are more important and persistent than the classical and neo-classical theorists, with the notable exception of Cairnes, assumed.<sup>9</sup> The empiricists formulated an original picture of the modern labour market that focused attention on the supply side of the market in contrast to the marginal productivity principle of the traditional wage theory which emphasized the demand side. The modern theory, generally

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<sup>9</sup> For an early statement of the marginal analysis controversy, see L. R. A. LESTER, « Shortcomings of the Marginal Analysis for Wage Employment Problems » *American Economic Review*, March 1946, pp. 63-82 ; and F. MACHLUP, « Marginal Analysis and Empirical Research », *American Economic Review*, September 1946, pp. 519-554.



labelled as the « structured » market,<sup>10</sup> is significant specifically because it focused attention on market imperfections, the role of trade unions, impediments to labour mobility and institutional factors lessening or even preventing the operation of the competitive forces of the market mechanism.

Essentially, the structured market hypothesis is based on the insulation of certain segments of the work-force from the competitive forces of the market. It has two main restrictive effects : On the one hand, it limits the range of occupational choice open to job-seekers by creating institutional barriers in the hiring and recruitment practices of firms. On the other hand, workers already employed, become locked-in<sup>11</sup>, or committed to, particular firms thereby acquiring specific or untransferable skills. The result is that labour mobility tends to be minimized and job-seekers are prevented from moving to jobs offering the most favourable employment terms.

The controversy between the marginalists and the institutionalists now appears to have reached a form of reconciliation. Thus, it is generally accepted that institutional obstacles to labour mobility tend to slow down the competitive forces in the labour market so that a market disequilibrium, in the form of a shortage or excess of supply, is more or less a usual state of affairs at any point in time. On the other hand, the long-run tendency towards equilibrium as predicated by the marginalist wage theory seems to command general acceptance. Thus, « the usual approach to wage theory today involves analyses of the demand for labour in accordance with the marginal productivity principle and of the supply of labour in accordance with the structured market ».<sup>12</sup>

#### THE NEED FOR GOVERNMENT INTERVENTION :

Recognition that manpower shortages or surpluses are fairly usual conditions in the labour market at any point in time has lead writers to

<sup>10</sup> L. FISHER, « The Harvest Labor Market » in *Labor Problems : Cases and Readings*, G. P. Schultz and J. R. Coleman, editors, New York, McGraw-Hill Co., 2nd edition, 1959 : C. KERR, « Balkanization of Labor Markets » in E. W. BAKKE *et al* : *Labor Mobility and Economic Opportunity*, New York, John Wiley, 1954.

<sup>11</sup> See L. G. REYNOLDS, *The Structure of Labor Markets*, New York, Harper and Brothers, 1951, pp. 79-83 ; R. A. LESTER, *Hiring Practices and Labor Competition*, Industrial Relations Section, Princeton University, 1954, Chapter 5.

<sup>12</sup> E. J. BURTT, JR., *Labor Markets, Unions and Government Policies*, New York, St. Martin's Press, 1963, p. 300.

press for a « positive or active manpower policy »<sup>13</sup> aimed at strengthening the effectiveness of the allocative mechanism of the market. The mix of action programmes recommended include the collection and dissemination of labour market information especially concerning job vacancies and job-seekers ; job counselling and career guidance services ; manpower-forecasting to derive future requirements by occupations, industries and regions ; and provision of mobility, training and retraining programmes.

In the context of an active manpower policy, government-subsidized training programmes can be said to serve three principal objectives : (1) to remove observed manpower shortages by increasing supply ; (2) to raise the employability of job-seekers who otherwise would remain unemployed or under-employed ; and (3) to enhance the transferability of workers, who for some reason, may wish to move from one firm or region to another.

The argument that government-subsidized training is required to remove manpower shortages presumes that the private sector supplies only an insufficient volume of training as, for example, shown by the relatively small number of skilled craftsmen provided by apprenticeship schemes. Similarly, the argument for increased employability through training is supported with reference to the existence of disadvantaged groups and institutional barriers to hiring in certain firms. On the other hand, the promotion of transferability of labour by training and retraining schemes is justified as a means of offsetting narrow or excessive specialization which tends to tie workers to their existing jobs or localities.

In summary, it is agreed that government-subsidized training schemes can contribute in several ways to the development of a more adaptable and flexible labour force and a more efficient utilisation of its manpower resources.

#### A CRITIQUE OF THE INSTITUTIONALIST CASE :

Admittedly, these arguments provide a powerful rationale for a government-subsidized training. However, as this rationale is derived from a presumed failure of the private sector to undertake what is considered to be an adequate volume of training, it can only be used to justify a *residual* amount of government-subsidized training, i.e. over

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<sup>13</sup> E. W. BAKKE, *A Positive Labor Market Policy*, Charles E. Merrill Books Inc., Columbus, Ohio, 1963 ; R. A. LESTER, *Manpower Planning in a Free Society*, Princeton University Press, Princeton, 1966 ; Organization for Economic Cooperation and Development, *Active Manpower Policy, Final Report*, Paris 1965.

and above what the private firms and workers would be willing and able to supply. In practice, it would be virtually impossible to identify and quantify all the various types of training undertaken in the private sector<sup>14</sup>. It would be even harder to determine which type of training should be subsidized and in which industries and occupations<sup>15</sup>. Under the circumstances, government is likely to subsidize certain training activities that would be carried out in the private sector anyway. Thus, the argument that the private sector provides insufficient volume of training may tend to overstate the case for government subsidized training.

This possibility is further enhanced by the difficulty of translating theoretical criteria regarding, for instance, the selection of trainees, into practical, operational terms. Thus, although it may be inferred from efficiency criteria that no person should be admitted into a training scheme unless the value of his pre-training marginal product is less than the going wage-rate in the occupation for which he is most suited, and similarly that no trainee should complete a training course until the value of his marginal product is raised effectively up to the level of the going wage-rate in the occupation for which he is being trained, in practice it would be virtually impossible to administer a training programme on such criteria. Thus, typically admission into government-subsidized training programmes is likely to be considerably less rigorous than what the efficiency criteria would imply.

The objective of promoting labour transferability through training, too, is likely to overstate the case for a government-subsidized training scheme since it implies that greater labour mobility is necessarily beneficial. In fact, mobility of labour usually generates significant private and social costs such as the recruitment costs incurred by hiring firms and the opportunity cost of time spent in changing employers or localities. Therefore, the objective of promoting labour transferability through

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<sup>14</sup> The wide range of training activities provided by private firms include induction or familiarisation courses on-the-job or in special work-shops or classrooms (usually following hiring), informal instruction given by foremen or supervisors on-the-job, safety and first-aid classes, demonstrations (when new equipment is introduced), and various types of executive and management training schemes. Often training activities may last a few days or hours.

<sup>15</sup> G. BECKER's well-known distinction between specific and general training may appear to resolve the issue. His arguments imply that government should subsidize only *general* training since this is the type that is likely to enhance the mobility and employability of the trainee. However, in practice it is very difficult to distinguish between specific and general types of training. On this problem, see G. S. BECKER: *Human Capital, A Theoretical and Empirical Analysis*, New York, National Bureau of Economic Research, 1964, pp. 11-29.

training should be pursued only if and when the associated benefits are greater than the associated costs. This criterion will inevitably lead to a more restricted pursuit of the objective of promoting labour transferability through training than otherwise.

### The Externality Argument

The externality argument<sup>16</sup> is a theoretical attempt to demonstrate the practical unattainability of the formal conditions of general equilibrium theory owing to the generation of external economies or diseconomies from incidental market inter-dependence between individuals. The generation of these externalities is offered as a proof of a fundamental divergence between social and private net products that cause the competitive market, otherwise guided by Adam Smith's « invisible hand » principle, to fail to achieve « Ideal output ». The argument is then given as a justification for government intervention in the workings of the price mechanism with appropriate taxes and subsidies to offset these externalities and move the economy nearer towards « ideal output ».

#### THE EXTERNAL ECONOMIES OF MANPOWER TRAINING

One specific source of external economies, long recognized by economists, is manpower training. Marshall was the first economist who referred to the external economies of training to explain the reluctance of private employers to invest in a training programme. He stated « that whoever may incur the expense of investing capital in developing the abilities of the workman, these abilities will be the property of the workman himself ».<sup>17</sup> Marshall's implication is that, since trained manpower can be utilised by many firms, the possibility of pirating by competitors acts as a disincentive for a profit-maximizing firm to invest in a skill development programme. Whenever external economies of training are generated, the firm which invests in training will receive less than the total return on its investment because some other firms will reap benefits at the expense of the investor. Consequently, when the private marginal net return on investment in training falls to zero, the social marginal net return will still be positive. Therefore, from the standpoint of society as a whole, an increase in the scale of manpower training will be called for in spite of the fact that private firms will not be prepared to undertake the additional training.

<sup>16</sup> W. J. BAUMOL, *Welfare Economics and the Theory of the State*, Cambridge, Mass., Harvard University Press, 2nd edition, 1965.

<sup>17</sup> A. MARSHALL, *Principles of Economics*, Macmillan & Co. Ltd., 1962, 8th edition, p. 237.

On the other hand, even if it were assumed that the workers were rational utility maximizers, it is virtually certain that there will still be an underinvestment in training by workers themselves since the private rate of time preference will be in excess of the social rate in order to make up for the considerable uncertainty of pay-off. In addition, since human capital is a highly illiquid asset and cannot be sold, it would ordinarily make a poor collateral for bank loans to finance a private training course. Furthermore, those most urgently requiring training in order to stay or become employed, such as the 'disadvantaged' and the unskilled persons, are typically the least likely to have means to purchase training. This may be true even though the implicit rate of return, both in private and social terms, may be extremely attractive.

Since the scale of manpower training undertaken in the private sector is likely to be below the social scale as indicated by the social rate of time preference, it follows that net social benefits will be generated by a government-subsidized manpower training programme. Or, as one economist put it, « there is scope for a gain in efficiency through programmes for re-training and re-location of labour, programmes that would be socially profitable (viewed as an investment in increasing productive capacity) but are not undertaken privately largely owing to the institutional difficulties of borrowing and lending on the security of human capital ». <sup>18</sup>

#### A CRITIQUE OF THE EXTERNALITY CASE

It has been argued <sup>19</sup> that the case for government intervention in economic organization, based on the externality argument, has traditionally been exaggerated by economists because the traditional approach has called for restraining harmful external effects without considering the spill-over effects stemming from the proposed government measures themselves. According to this argument the problem raised by externalities is not simply one of restraining those responsible for harmful effects, but rather one of weighing whether the « gain from preventing the harm is greater than the loss which would be suffered elsewhere as a result of stopping the action which produces the harm ». <sup>20</sup> To the extent that such a comparison is not undertaken, it is conceivable that some recommend-

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<sup>18</sup> H. G. JOHNSON, *The Canadian Quandry, Economic Problems and Policies*, Toronto, McGraw-Hill, 1963, p. 62.

<sup>19</sup> R. H. COASE, « The Problem of Social Cost », *The Journal of Law and Economics*, Volume III, October, 1960, pp. 1-44.

<sup>20</sup> *ibid.*, p. 27.

ations calling for state intervention in economic organization, based on the externality argument, may, in fact worsen rather than improve resource allocation. In terms of a government-subsidized training programme, such a result would occur when an increment of subsidized training displaces an increment of private training at net social cost. For example, a government training agency may undertake to supply training when a private firm would have undertaken it anyway. Assuming that cost per unit of output in that firm is increased somewhat because, say, of frequent control and inspection by government officials, net external diseconomies of training would be generated.

A central difficulty with the externality argument is that externalities, particularly in social terms, have never been satisfactorily measured by the measuring rod of money due to their elusive character. Of course measureability is not a pre-requisite for accepting the existence or generation of external benefits of a training scheme financed by public funds. It is, however, necessary for determining the optimal volume or the relative profitability of such a scheme.

### **Summary and Conclusions**

This paper has reviewed three topics in economics that shed light on the theoretical basis and scope of government intervention in the workings of the employment market with manpower training schemes. The three topics were the structural unemployment hypothesis, the structured market controversy and the externality arguments.

It has been shown how a rationale for a government-subsidized training scheme can be derived from each of these topics. In summary, it was seen that the structuralist case rests on the assumption that such a scheme can improve the trade-off options for achieving consistently and simultaneously, the twin objectives of price stability and high level of employment; that the structured market approach yields a rationale centering on the premise that the private sector is unwilling or unable to undertake an adequate volume of training consistent with a described rate of economic growth; and that the externality argument presents a case on the ground that a government-subsidized training programme would generate net social external economies.

It has been shown however, that all three topics are subject to strong counter-arguments which suggest that, for theoretical and operational reasons, the actual scale of government-subsidized training can well be pushed beyond the optimal point.

## LA POLITIQUE ÉCONOMIQUE À LA BASE DES PROGRAMMES DE FORMATION DE LA MAIN-D'OEUVRE

Les programmes gouvernementaux de formation de la main-d'oeuvre ont connu depuis quelques années une expansion rapide. Les économistes entreprennent sans hésiter des recherches empiriques visant à évaluer le rendement des fonds publics utilisés à cette fin, sans s'attacher outre mesure, cependant, aux théories de base qui motivent une politique de formation de la main-d'oeuvre.

Comment expliquer la politique de formation de la main-d'oeuvre ?

Est-il justifiable de financer les programmes de formation de la main-d'oeuvre au moyen de fonds publics ? Quelles sont les limites d'une politique de formation de la main-d'oeuvre ?

Nous analysons ces questions à la lumière de trois aspects économiques importants, issus respectivement de la macro- et de la micro-économie, et de l'économie du bien-être.

Premièrement, l'hypothèse du chômage structurel justifie théoriquement ces programmes de formation en supposant qu'elles rendront plus faciles les échanges nécessaires pour obtenir à la fois une stabilité des prix et un niveau élevé d'emploi ; deuxièmement, l'hypothèse d'un marché du travail structuré en confirme le bien-fondé en affirmant que le secteur privé ne veut pas ou ne peut pas satisfaire à la demande de formation de la main-d'oeuvre requise par le taux de croissance économique.

Troisièmement, l'hypothèse des bénéfices sociaux justifie ces programmes par le fait qu'une telle politique gouvernementale produit, au niveau social, des économies nettement supérieures aux coûts impliqués.

Une évaluation de ces trois approches permet d'y voir d'importantes limites. Pour ce qui est de l'argument au niveau structurel, il est prouvé que la formation de la main-d'oeuvre ne joue qu'un rôle restreint dans la stimulation de la demande, puisque l'offre de travailleurs plus qualifiés ne peut pas d'elle-même créer une demande pour ces travailleurs qualifiés. L'argument structuraliste ne tient pas compte des difficultés qui existent à évaluer l'ampleur et le type de la formation déjà fournie par l'entreprise privée et par les travailleurs eux-mêmes, ainsi que la quantité résiduelle de formation que le gouvernement devra fournir pour combler le déficit. Pour ce qui est des bénéfices sociaux de ces programmes, il est tout indiqué d'affirmer qu'ils échappent à toute mesure monétaire, de sorte qu'il demeure impossible d'évaluer financièrement l'avantage social de ces programmes, ainsi que le coût qu'ils impliquent.

On peut donc justifier la politique gouvernementale de financement des programmes de formation de la main-d'oeuvre, en s'appuyant sur la théorie économique, sans pouvoir toutefois fixer le point d'ampleur que doit prendre ces programmes. Les problèmes théoriques et pratiques qui l'empêchent font voir aussi le danger qui existe de dépasser ce point maximal et de dépenser inutilement les fonds publics, sous prétexte qu'il est motivé par un raisonnement logique.

Il est facile de pousser très loin un tel raisonnement et d'en exagérer l'importance.